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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/661,341	09/12/2003	Bernd Meyer	P2001,0154	8043

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EXAMINER	
LASHLEY, LAUREL L	

ART UNIT	PAPER NUMBER
2132	

MAIL DATE	DELIVERY MODE
06/22/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/661,341	MEYER ET AL.	
	Examiner	Art Unit	
	Laurel Lashley	2132	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 April 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8,13-16 and 21* is/are rejected.

7)☒ Claim(s) *9-12 and 17-20* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 04/10/2007 have been fully considered but they are not persuasive. It is Applicant's assertion "that the instant application is only used for decryption and not for forming a digital signature which is computationally intensive. This is in contrast with Hopkins which uses the private key aB for forming a computationally intensive digital signature in the formulation of the value S as noted above." Applicant's arguments are not persuasive since Hopkins teaches that a private key is used to decrypt as in Applicant's claim limitation regardless of whether the private key of Hopkins performs an additional functionality such as forming a digital signature.

2. It is also Applicant's assertion that "the instant application teaches a symmetrical encryption algorithm using the common public key." The Examiner contends that Applicant is acting as his own lexicographer since a "common public key" is not known in the art. The Examiner believes Applicant's "common public key" to be nothing more than a shared secret or key known by both sides which is taught by Hopkins.

3. Applicant's arguments taken in view of claims 9 – 12 and 17 –20 however are persuasive and therefore the rejection is withdrawn.

Allowable Subject Matter

4. Claims 9 – 12 and 17 – 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance: The prior art of record alone or in combination does not disclose the specificity of performing an encryption and decryption method using discrete exponentiation in a semigroup.

As for claim 9 and similar claim 17, the prior art does not disclose:

Performing a first cryptographic encryption method using with the steps of:

using the verifying unit to generate a number t ϵ T, where T is a subrange of integers;

using the verifying unit to calculate an element $h^{f(t)}$ ϵ H, where f : T →T' is a mapping into a subrange T' of the integers, which is not necessarily different from T, H represents a multiplicatively written semigroup generated by element h, with a discrete exponentiation of a base h as a one-way function in the semigroup H;

using the verifying unit to calculate from the public key, $k_{pub} = h^{f(d)}$ ϵ H, element π $(k_{pub}^{f(t)})$ ϵ G, where π : H → G specifies a mapping of the semigroup H into a group G, d ≡ k_{priv} ϵ T is the private key which is accessible only to the proving unit, and a mapping t →$h^{f(t)}$ → π $(k^{f(t)})$ from the subrange of the integers T to the group G represents a one-way function; and

using the verifying unit to encrypt the at least one data element, z, by a combination with respect to the encrypted data element, z' = z ∘ π $(k_{pub}^{f(t)})$ ϵ G.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laurel Lashley whose telephone number is 571-272-0693. The examiner can normally be reached on Monday - Thursday, alt Fridays btw 7:30 am & 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron, Jr. can be reached on 571-272-3799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Laurel Lashley
Examiner
Art Unit 2132

LLL
19 June 2007

KAMBIZ ZAND
SUPERVISORY PATENT EXAMINER